REMARKS

The application has been reviewed in light of the Office Action dated September 25, 2008. Claims 1-20 are pending in this application. By the present Amendment, claim 1 has been amended. It is submitted that no new matter has been added and no new issues have been raised by the present Amendment.

The disclosure was objected to because of various formal matters. In response, the specification has been amended to attend to the formal matters. Withdrawal of the objection to the disclosure is respectfully requested.

The claims were rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite. Without conceding the propriety of these rejections, the claims have been carefully reviewed and amended with particular attention to the points raised in the Office Action. Withdrawal of the rejection under Section 112, second paragraph, is respectfully requested.

Claims 1, 2, 5, 8, 10, 16 and 19 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by Lorisch et al. Claims 1, 3, 4 and 11 were rejected under 35 U.S.C. §103(a) as allegedly obvious from U.S. Patent 4,013,487 to Ramqvist et al. Claims 2, 4, 10, 12, 13 and 16 were rejected under Section 103(a) as allegedly obvious from U.S. Patent 5,217,776 to Yoshino et al. Claims 7, 15 and 18 were rejected under Section 103(a) as allegedly obvious from Lorisch et al. in view of Lowenheim. Claims 6 and 14 were rejected under Section 103(a) as allegedly obvious from Lorisch et al. in view of U.S. Patent 3,295,936 to Asano et al. Claims 9 and 20 were rejected under Section 103(a) as allegedly obvious from Lorisch et al. in view of U.S. Patent 3,901,771 to Froman et al. Applicants have carefully considered the Examiner's comments and the cited art, and respectfully submit that independent claim 1 is patentable over

the cited art, for at least the following reasons.

Independent claim 1 relates to a method of case-hardening a stainless article by use of gas including carbon and/or nitrogen, i.e., gas carburising and/or gas nitriding, whereby carbon and/or nitrogen atoms are diffused through a surface of the article. The method comprises activating the surface of the article, applying a top layer on the activated surface to prevent repassivation, the top layer including one or more of the metals Ni, Ru, Co or Pd, which are catalytic to decomposition of the gas and carrying out case hardening below a temperature at which carbides and/or nitrides are produced.

Larisch et al., as understood by Applicants, relates to plasma nitriding of stainless steels at low temperatures. However, plasma nitriding and/or plasma carburising are not considered a method for gas carburising and/or nitriding an article. That is, plasma nitriding and plasma carburising rely on the presence of ionised gas species, which are not present in gaseous treatment. In addition, plasma processes such as those disclosed in Larisch et al. have disadvantages over gas carburising and/or gas nitriding. For example, in plasma processes, the carbon/nitrogen content cannot be controlled accurately on the basis of straightforward thermodynamics, but can only be determined empirically. In addition, only regions where plasma can be generated or regions which are in the line of sight of the implantation gun can be treated. Moreover, the surface finish may suffer from extensive bombardment of ions (sputtering) during plasma/implantation treatment.

Accordingly, Larisch et al. does not disclose a method of case-hardening a stainless article by use of gas including carbon and/or nitrogen, i.e., gas carburising and/or gas nitriding, as now recited in independent claim 1. In addition, Larisch et al. does not disclose applying a top layer

on the activated surface to prevent repassivation, the top layer including one or more of the metals Ni, Ru, Co or Pd, which are catalytic to decomposition of the gas prior to carrying out case hardening, as also recited in independent claim 1.

Accordingly, Applicants submit independent claim 1 is patentably distinct from Larish et al.

In addition, Applicants submit independent claim 1 would not have been obvious in view of Ramqvist et al.

Ramqvist et al., as understood by applicants, relates to nickel and/or cobalt-coated steel with carburized interface. A coating of Nickel and/or Cobalt is applied to the surface of a steel article and subsequently carburisation of the coated article at an austenitising temperature in excess of 725°C, preferably in the range of about 800°C to 1,000°C (col. 3, lines 12-21.) An object of the Ramqvist et al. is to provide a corrosion resistant carburised steel article. However, applicants find no teaching or suggestion that the steel article is a stainless steel article (e.g., an article having a high content of cromium.) Furthermore, if a stainless steel article was carburised at a temperature in excess of 725°C, cromium carbides would form, which reduces the free cromium content whereby the corrosion properties would be deteriorated.

In addition, the austenitising temperature suggested by Ramqvist will bring about surface alloying of the article with Nickel during the nitriding process. This alters the composition of the steel surface.

In contrast, as now recited in independent claim 1, case hardening is performed below a temperature at which nitrides are produced, so that no or negligible surface alloying with Nickel takes place.

Accordingly, Applicants find no teaching or suggestion in the cited art of carrying out case hardening below a temperature at which carbides and/or nitrides are produced, as recited in independent claim 1. In addition, Applicants find no teaching or suggestion in the cited art activating the surface of the article, prior to applying a top layer on the activated surface to prevent repassivation, the top layer including one or more of the metals Ni, Ru, Co or Pd, which are catalytic to decomposition of the gas, as also recited in independent claim 1.

The Office is hereby authorized to charge any additional fees that may be required in connection with this amendment and to credit any overpayment to our Deposit Account No. 03-3125.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition, and the Commissioner is authorized to charge the requisite fees to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Entry of this amendment and allowance of this application are respectfully requested.

Respectfully submitted,

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